Agricultural Meteorology SOV/1806

75. Agroclimatic manuals
Literature

367
374

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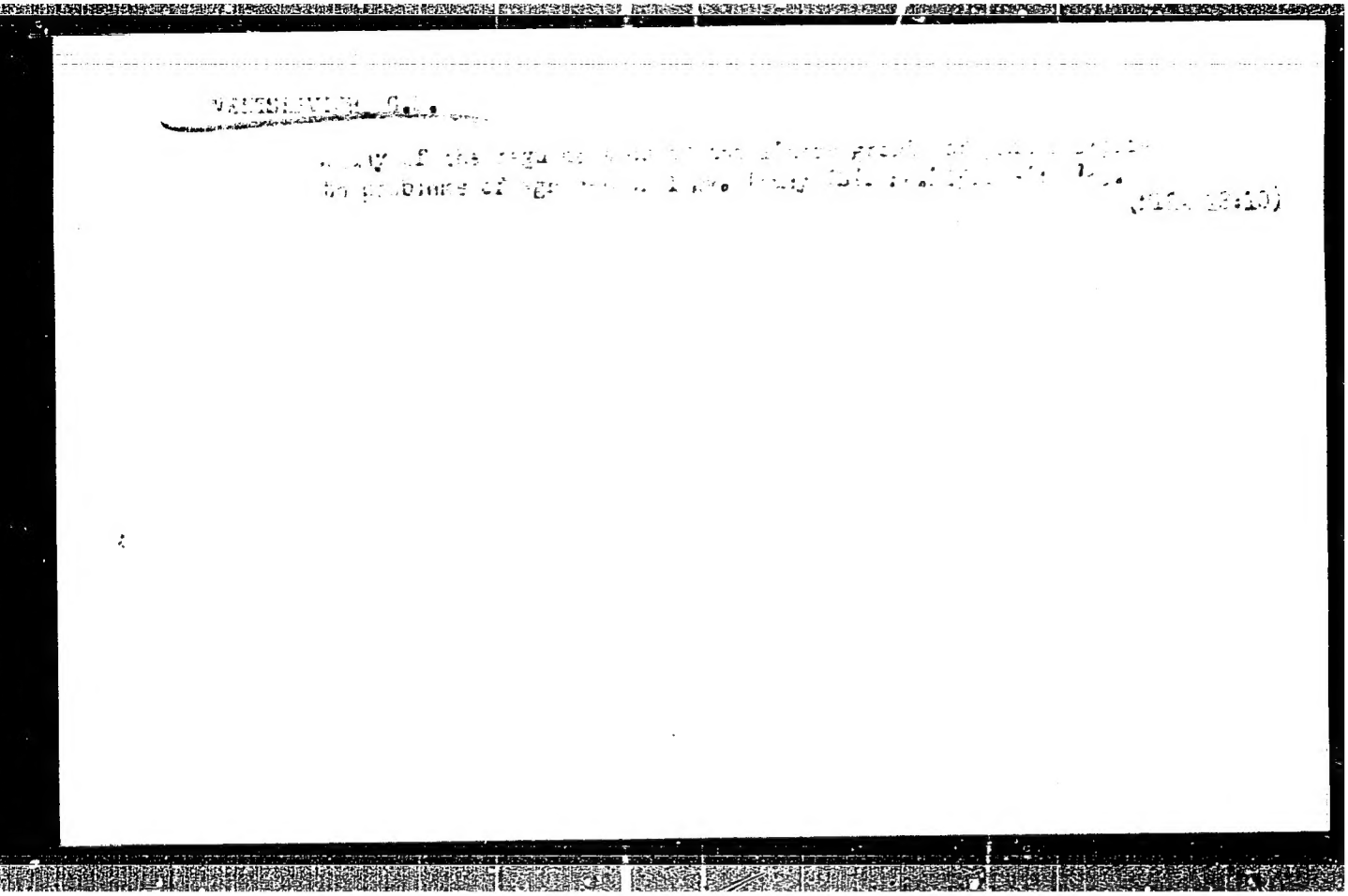

VENTSKEVICH, L.A., red.

[Cranes used in construction and assembly] Stroitel'no-montazhnye krany; spravochnoe posobie. Moskva, TSentr. biuro tekhn. informatsii. No.3.[Hoists and lifts used in assembly] Montazhnye pod"emniki i vyshki... 1962. 70 p. (MIRA 16:4)

1. Russia (1917- R.S.F.S.R.)Ministerstvo stroitel'stva. Upravleniye mekhanizatsii spetsial'nykh i montazhnykh rabot. TSentral'noye konstruktorskoye byuro.
(Hoisting machinery)

BOBORYKIN, Ye.P., red.; SARYCHEV, I.I., red.; FRADKIN, S.D., red.; SHAKIROV, R.A., red.; LISOGOR, A.A., red.; VENTSKEVICH, L.A., red.

[Technological information and propaganda at construction projects in Russia] Tekhnicheskaia informatsiia i propaganda na stroikakh Rossii; sbornik statei. Moskva, TSentr. biuro tekhn. informatsii, 1962. 106 p. (MIRA 16:7)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.
(Construction industry—Technological innovations)

VENTSEKEVICH, V. Z.

Head Physician, Bryansk Provincial Hospital

"Surgical therapy of cancer of the cardia and the lower portion of the esophagus," by N.M. Amosov, Vest. khir. 72 no. 4 Jl-Ag 1952.

VENTSKEVICH, Yuriy Antonovich

[Safety manual for workers engaged in the manufacture of strip-type parts] Pamiatka po tekhnike bezopasnosti dlia rabochikh, zaniatykh izgotovleniem pogonazhnykh izdelii. Moskva, Stroiizdat, 1965. 13 p. (MIRA 18:10)

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AUTHOR: Ventsel', A.D.

TITLE: Non-negative additive functionals of Markov processes

PERIODOCAL: Akademii nauk SSSR. Doklady, v. 137, no. 1, 1961, 17 - 20

TEXT: The notations are the same as in the papers by Ye.B. Dynkin (Ref.1 : UMN, 15, no. 2, 3 (1960) ; Ref. 2 : Osnovaniya teorii markovskikh protsessov [Foundations of the Theory of Markov processes], 1959). Let $X = (x_t, \zeta, \mathcal{M}_t, P_x, \theta_t)$ be a homogeneous Markov process. A non-negative additive homogeneous functional of X means the function $\varphi_t^s(\omega)$ of the elementary event ω and $0 \leq s \leq t \leq \infty$ which satisfies the following conditions :

A. φ_t^s is ω-measurable with respect to the σ-algebra generated by the events $\{x_u \in \Gamma\}$, $0 \leq u \leq t$. There exists a set N with a P_x-measure 0 so that for $\omega \notin N$ the following conditions are satisfied :

B. $\varphi_t^s + \varphi_t^u = \varphi_t^s$

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Non-negative additive functionals ...

C. $\varphi_{t+h}^{s+h} = \theta_h \varphi_t^s$

D. $0 \leq \varphi_t^s \leq \infty$

E. φ_t^s is continuous from the right side with respect to t.

If φ_t^s is continuous from the right side with respect to s too then

$$f(x) = M_x \varphi_\infty^0 \qquad (1)$$

is an excessive function , i.e. $f(x) \geqslant 0$, $T_t f(x) \equiv M_x f(x_t) \leq f(x)$, $T_t f(x) \to f(x)$ $(t \to 0)$. (1) is called a representation by a generalized potential. The excessive function $f(x)$ is called purely excessive if $T_t f(x) \to 0$ $(t \to \infty)$. The author considers only Markov standard processes (cf. (Ref. 4 : V.A. Volkonskiy, Tr. Mosk. matem. obshch. 9, 143(1960))).

Theorem 1 : Let the process X be so that every bounded purely excessive function is representable by a generalized potential, where the corresponding functional is given by

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Non-negative additive functionals ...

$$\varphi_t^s = \lim_{h \to 0} \int_s^t \frac{f(x_u) - T_h f(x_u)}{h} du . \qquad (2)$$

Then for the fact that a finite excessive function f is representable by a generalized potential it is necessary and sufficient that

$$M_x f(x_{\tau\{f>n\}}) \to 0 \quad (n \to \infty) \qquad (3)$$

holds for all x . Here $\tau\{f>n\}$ is the moment of the first reach of the set $\{x : f(x) > n\}$; the function below the sign of the mathematical expectation equals zero if the process does not reach this set.
The theorems 2 and 3 are defined for three-dimensional Wiener processes.
Theorem 2 : In order that an excessive function $f(x) \not\equiv \infty$ given by

$$f(x) = \int \frac{1}{|x - y|} \mu(dy) \qquad (4)$$

where $|x - y|$ is the distance between x and y, μ - - measure in the

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Non-negative additive functionals ...

three-dimensional space, is representable by a generalized potential it is necessary and sufficient that the measure μ equals zero for every set of the capacity zero. It is also sufficient that only $\mu \{ f = \infty \} = 0$.

Theorem 3 : There exists a one - to - one relation between finite functionals of the three-dimensional Wiener process for which $\varphi_{\infty}^{s} = \lim_{t \to \infty} f_t^s$, and such measures μ in the three-dimensional space that there exists an increasing sequence of closed sets F_n which fills the whole space and for which $\int_{F_n} \frac{1}{|x - y|} \mu(dy) < C_n < \infty$, and that with the probability 1 there exists an n so that $x_t \in F_n$ $(0 \leq t < \infty)$. The connection between functional and measure is as follows: for every non-negative Borel function $g(y)$ it holds

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$$M_x \int_0^\infty g(x_n)\,\varphi(du) = \int \frac{g(y)}{|x - y|}\,\mu(dy) \quad .$$

Functionals φ_t^s being finite for $s,\ t \in [0,\infty)$, $(0, \infty]$, $(0, \infty)$ with the probability 1 are also in a one-to-one relation with corresponding classes of measures.
The author mentions V.A. Volkonskiy.
There are 3 Soviet-bloc and 3 non-Soviet-bloc references. The two references to the English-language publications read as follows: G.A. Hunt, Illinois J. Math. 1, 44 (1957) ; T. Radó, Subharmonic Functions, Berlin, 1937.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)
PRESENTED: November 18, 1960, by A.N. Kolmogorov, Academician
SUBMITTED: November 14, 1960

Card 5/5

16(1),16(2)

AUTHOR: Ventsel',A.D. SOV/52-4-2-4/13

TITLE: On Lateral Conditions for Multi-Dimensional Diffusion Processes

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, 1959, Vol 4, Nr 2, pp 172-185 (USSR)

ABSTRACT: Let K be a closed bounded domain in the n-dimensional Euclidean space. Let the boundary Γ of K be sufficiently smooth. Let C be the Banach space of functions continuous on K with the norm $\|f\| = \max_{x \in K} |f(x)|$; let $\mathcal{A}$ be an elliptic differential operator of second order in K. The author seeks the most general lateral conditions which restrict $\mathcal{A}$ to an infinitesimal operator of a timely homogeneous Markov process in K satisfying the condition of Feller. Processes the infinitesimal operators of which are restrictions of the closure of an elliptic operator are called diffusion processes. The author solves the given problem for the case that K is a circle or a sphere and the process invariant with respect to the rotation. In the general case the author obtains partial results. 5 theorems and 5 lemmas are given. There are 8 references, 4 of which are Soviet, 3 American, and 1 Japanese.

SUBMITTED: November 24, 1958

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ACC NR: AP6030434 SOURCE CODE: UR/0420/66/000/006/0072/0077

AUTHOR: Ventsel', E. S. 21

ORG: None B

TITLE: Axisymmetric contact problem on the connection between a circular cylindrical shell and an elastic plate

SOURCE: Samoletostroyeniye i tekhnika vozdushnogo flota, no. 6, 1966, 72-77

TOPIC TAGS: mechanics, stress analysis, contact stress, shell theory, cylindric shell structure, ELASTIC PLATE

ABSTRACT: The author considers the axisymmetric problem of joints between circular cylindrical shells and thin elastic plates in the elastic stage. A general equation is given for bending of the shell under the effect of an arbitrary axisymmetric load and for uniformly distributed and varying loads. Expressions are derived for determining displacement of the contact line of the shell and the plate and an example is given showing application of the method to a circular cylindrical shell with a hinged support connected to a thin elastic plate. It is found that the shell is relieved by the thin elastic plate which takes on part of the load applied to the shell. Orig. art. has: 3 figures, 1 table, 23 formulas.

SUB CODE: 20/ SUBM DATE: none

Card 1/1 egh

SOV/137-58-9-19598

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 210 (USSR)

AUTHORS: Fedot'yev, N.P., Grilikhes, S.Ya., Foroponova, N.L., Yu-Chen-Dya, Ventsel', I.

TITLE: Ornamental Finishing of Aluminum (Dekorativnaya otdelka alyuminiya)

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1957, Nr 43, pp 38-42

ABSTRACT: A method for ornamental finishing of Al by means of its electrochemical oxidation followed by adsorption coloring of the oxide film is described. The operations of the industrial process of coloring Al golden are examined. The importance of conducting the chemical and electrochemical polishing of the metal before the oxidation and the correct selection of the coloring agents is emphasized. The compositions of solutions for the chemical and electrochemical polishing, the working conditions, and the comparative characteristics of the operation are adduced. Mixtures of alizarin red and mordant true yellow is recommended for the coloring. Depending upon the ratio of their concentrations in the solution it is possible to tint the oxide films the color of pure gold and of its alloys with Cu and Ag. R.S.

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1. Aluminum--Processing 2. Aluminum--Oxidation 3. Aluminum--Color 4. Copper--Applications 5. Silver--Applications

VENISEL', ~~M.K.~~

3(2), 3(4) SOV/6-59-7-25/25

AUTHOR: None Given

TITLE: Chronicle (Khronika)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 7, p 80 (USSR)

ABSTRACT: From May 27 to June 1, a conference dedicated to the history of natural sciences and technology took place in Moscow. It was organized by the Institut istorii yestestvoznaniya i tekhniki AN SSSR (Institute of History of Natural Science and Technology of the Academy of Sciences of the USSR) and the Sovetskoye natsional'noye ob"yedineniye istorikov yestestvoznaniya i tekhniki (Soviet National Union of Historians of Natural Science and Technology). The following reports were delivered at the meetings of the Section of Geologic-geographical Sciences: S. Ye. Fel', "Russia's Cartography in the 18th Century". S. G. Yeremyan," Topographic Map of Armenia Compiled at the End of the 6th and Beginning of the 7th Century". M. K. Bocharov, "Application and Development of Statistical Methods in Cartography". A. S. Chebotarev, "History of the Application of the Method of Least Squares in Geodesy". M. K. Ventsel', " Development of Accurate Methods of Astronomic Determinations

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in the Field". L. N. Avdeyev, B. D. Yarovoy, "Development of Light Location (svetolokatsiya) in the USSR." A. N. Lobanov, " Development of Electronic Methods in Photogrammetry". F. V. Drobyshev, "History of the Building of Photogrammetric Apparatus in the Soviet Union ".

Card 2/2

VEITSEL', M.K., doktor tekhn.nauk, prof.

Astronomy at the Moscow Geodetic Institute; from the history of practical field astronomy in Russia. Trudy MIIGAIK no.35:67-96 '59. (MIRA 13:5)

1. Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii, kafedra astronomii.
(Astronomy, Spherical and practical)

[illegible], Mikhail Konstantinovich, 18[illegible]-

Interpolation; chapter from a course in "Spherical Astronomy" of the 3rd year at the Geodetic Department of the Moscow Mezhev Institute. Moskva, Izd. studentov M.M.I., 1927. 31 p.

SOV/124-57-5-6069

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 149 (USSR)

AUTHOR: Ventsel', N. A.

TITLE: How the Stability of a Composite Bar Assembly Is Affected by the Mode of Constraint Employed (Vliyaniye usloviy zakrepleniya na ustoychivost' sterzhnevykh naborov)

PERIODICAL: V sb.: Issledovaniya po vopr. ustoychivosti i prochnosti. Kiyev, AN UkrSSR, 1956, pp 113-122

ABSTRACT: The author uses the method of finite differences to solve the problem of the stability of a composite bar assembly comprised of two systems of rectilinear, mutually perpendicular, bars; each bar in each system is elastically constrained at both ends, each end of each bar being fastened to a fixed support; the two sets of supports for each bar system are discretely spaced in rectangular patterns. The dimensions and elastic properties of all the bars in each system are identical, such that when buckling occurs through the action of two systems of compressive forces the junction points may undergo displacement only in a direction that is perpendicular to the original plane of the assembly, i. e., to the plane that it occupied before buckling. Graphs are included to facilitate calculation.

A. M. Pen'kov

Card 1/1

[illegible], [illegible]

"Effect of Conditions of [illegible] and Fastening on the Stability of [illegible]." Cand Tech Sci, [illegible] of Mining, [illegible] Sci [illegible], [illegible], 19[illegible]. Dissertation. ([illegible] Zhurnal--Mekhanika, Moscow, [illegible])

SO: [illegible] 1[illegible], [illegible] Aug 19[illegible]

VENTSEL', N.A.

Stability of plane rod sets with rigid contour fastening. Sbor. trud. Inst. stroi. mekh. AN URSR no.15:81-92 '51. (MIRA 11:4)
(Elastic solids)

VENTSEL', N.A. [Ventsel', N.O.]; AGAREV, V.A. [Ahar'ov, V.A.]

Applying the method of initial functions to the determination of flexural vibrations of rectangular plates. Dop.AN URSR no.11:1485-1491 '60. (MIRA 13:11)

1. Kiyevskiy politekhnicheskiy institut. Predstavleno akademikom AN USSR G.N.Savinym.
(Elastic plates and shells--Vibration)

AGAREV, V.A. [Ahar'ov, V.A.] (Kiyev); VENTSEL', N.A. [Ventsel', N.O.] (Kiyev); CHERNYY, N.N. [Chornyi, M.M.] (Kiyev)

General solution of the problem of the bending of a plate in polar coordinates. Prykl.mekh. 7 no.5:521-529 '61. (MIRA 14:10)

1. Kiyevskiy politekhnicheskiy institut.
(Elastic plates and shells)

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D274/D303

AUTHORS: Ahar'ov, V.A., Ventsel', N.O., and Chornyy, M.M. (Kyyiv)

TITLE: On the general solution, in polar coordinates, of the problem of plate bending

PERIODICAL: Prykladnaya mekhanika, v. 7, no. 5, 1961, 521 - 529

TEXT: In solving, by the method of initial functions, concrete problems of bending of sectorial circular plates, the calculations can be considerably simplified by taking as the initial line, one of the radial boundaries of the plate. The general solution of this problem is considered. The dimensionless radial coordinate

$$\xi = \frac{1}{\lambda} \ln \frac{r}{r_1}, \quad \lambda = \ln \frac{r_2}{r_1} \qquad (1)$$

is introduced; the bending is denoted by w, the angle of rotation of the normal - by θ, the bending moments - by M, the torsion mo-

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ments - by $M_{r\theta}$, the reduced transverse stresses - by V, and the reaction - by R. The radial boundary $\theta = 0$ is taken as the initial line. The complete system of equations which describe the bending, is written in polar coordinates. Further, the canonical equations of the method of initial functions are set up. In this system,

$$L_{sj} = L_{sj}(\alpha, \theta) \qquad \begin{cases} s = w, \vartheta_r, \vartheta, M_r, M, V_r, V, R; \\ j = w, \vartheta, M, V \end{cases} \qquad (11)$$

are operators which have to be determined. For that purpose, three groups of equations are set up. It is found that these operators ought to satisfy conditions:

$$L_{sj}(\alpha, 0) = \begin{cases} 1, & \text{if } j = s \\ 0, & \text{if } j \neq s \end{cases} \qquad (17)$$

(s, j = w, ϑ, M, V). The expressions for the operators are found in the form of [illegible]ght formulas

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$$L_{ww} = \left[1 - \frac{(1-\mu)\,\alpha\,(\alpha-\lambda)}{2\lambda\,(\alpha-2\lambda)}\right]\cos\eta\alpha + \frac{(1-\mu)\,\alpha\,(\alpha-\lambda)}{2\lambda\,(\alpha-2\lambda)}\cos\eta\,(\alpha-2\lambda),$$

$$L_{w\vartheta} = \frac{1}{4}\left[(1-\mu)\,\alpha + 2\,(1+\mu)\,\lambda\right]\frac{\sin\eta\alpha}{\alpha} - \frac{1-\mu}{4}\sin\eta\,(\alpha-2\lambda),$$

$$L_{wM} = \frac{1}{2\lambda\,(\alpha-2\lambda)}\left[\cos\eta\,(\alpha-2\lambda) - \cos\eta\alpha\right], \qquad (18)$$

$$L_{wV} = \frac{1}{4\,(\alpha-\lambda)}\left[\frac{\sin\eta\,(\alpha-2\lambda)}{\alpha-2\lambda} - \frac{\sin\eta\alpha}{\alpha}\right];$$

$$L_{\vartheta,w} = \left[1 - \frac{(1-\mu)\,\alpha\,(\alpha-\lambda)}{2\lambda\,(\alpha-2\lambda)}\right]\alpha\cos\eta\alpha + \frac{(1-\mu)\alpha^2(\alpha-\lambda)}{2\lambda\,(\alpha-2\lambda)}\cos\eta\,(\alpha-2\lambda),$$

$$L_{\vartheta,\vartheta} = \frac{1}{4}\left[(1-\mu)\,\alpha + 2\,(1+\mu)\,\lambda\right]\sin\eta\alpha - \frac{1-\mu}{4}\alpha\sin\eta\,(\alpha-2\lambda),$$

$$L_{\vartheta,M} = \frac{\alpha}{2\lambda\,(\alpha-2\lambda)}\left[\cos\eta\,(\alpha-2\lambda) - \cos\eta\alpha\right], \qquad (19)$$

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$$L_{0,V} = \frac{\alpha}{4\lambda(\alpha-\lambda)}\left[\frac{\sin\eta(\alpha-2\lambda)}{\alpha-2\lambda} - \frac{\sin\eta\alpha}{\alpha}\right];$$

$$L_{0\omega} = \frac{(1-\mu)\alpha^2-(3-\mu)\lambda\alpha+4\lambda^2}{2\lambda^2(\alpha-2\lambda)}\alpha\sin\eta\alpha - \frac{1-\mu}{2\lambda^2}\alpha(\alpha-\lambda)\sin\eta(\alpha-2\lambda),$$

$$L_{0\theta} = \frac{1}{4\lambda}[(1-\mu)\alpha+2(1+\mu)\lambda]\cos\eta\alpha - \frac{1-\mu}{4\lambda}(\alpha-2\lambda)\cos\eta(\alpha-2\lambda),$$

$$L_{0M} = \frac{1}{2\lambda^2(\alpha-2\lambda)}[\alpha\sin\eta\alpha-(\alpha-2\lambda)\sin\eta(\alpha-2\lambda)], \qquad (20)$$

$$L_{0V} = \frac{1}{4\lambda(\alpha-\lambda)}[\cos\eta(\alpha-2\lambda)-\cos\eta\alpha];$$

$$L_{M,\omega} = \frac{1-\mu}{2\lambda}\frac{\alpha(\alpha-\lambda)}{\alpha-2\lambda}\{[-(1-\mu)\alpha^2+(3-\mu)\lambda\alpha-4\lambda^2]\cos\eta\alpha+$$
$$+(\alpha-\lambda)[(1-\mu)\alpha+4\mu\lambda]\cos\eta(\alpha-2\lambda)\},$$

$$L_{M,\theta} = \frac{1-\mu}{4}(\alpha-\lambda)\{[(1-\mu)\alpha+2(1+\mu)\lambda]\sin\eta\alpha-[(1-\mu)\alpha+$$
$$+4\mu\lambda]\sin\eta(\alpha-2\lambda)\},$$

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$$L_{M,M} = \frac{\alpha-\lambda}{2\lambda(\alpha-2\lambda)}\{-(1-\mu)\alpha\cos\eta\alpha + [(1-\mu)\alpha + 4\mu\lambda]\cos\eta(\alpha-2\lambda)\},$$

$$L_{M,V} = \frac{1}{4}[(1-\mu)\alpha + 4\mu\lambda]\frac{\sin\eta(\alpha-2\lambda)}{\alpha-2\lambda} - \frac{1-\mu}{4}\sin\eta\alpha; \quad (21)$$

$$L_{M\omega} = \frac{(1-\mu)\alpha(\alpha-\lambda)}{2\lambda(\alpha-2\lambda)}\{[(1-\mu)\alpha^2 - (3-\mu)\lambda\alpha + 4\lambda^2]\cos\eta\alpha -$$

$$-(\alpha-\lambda)[(1-\mu)\alpha - 4\lambda]\cos\eta(\alpha-2\lambda)\},$$

$$L_{M\vartheta} = -\frac{1-\mu}{4}(\alpha-\lambda)\{[(1-\mu)\alpha + 2(1+\mu)\lambda]\sin\eta\alpha - [(1-\mu)\alpha -$$

$$-4\lambda]\sin\eta(\alpha-2\lambda)\},$$

$$L_{M,M} = \frac{\alpha-\lambda}{2\lambda(\alpha-2\lambda)}\{(1-\mu)\alpha\cos\eta\alpha - [(1-\mu)\alpha - 4\lambda]\cos\eta(\alpha-2\lambda)\}, \quad (22)$$

$$L_{MV} = \frac{1-\mu}{4}\sin\eta\alpha - \frac{1}{4}[(1-\mu)\alpha - 4\lambda]\frac{\sin\eta(\alpha-2\lambda)}{\alpha-2\lambda};$$

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On the general solution, in ...

$$L_{V,w} = \frac{1-\mu}{2\lambda}\,\frac{\alpha(\alpha-\lambda)}{\alpha-2\lambda}\{[(1-\mu)\alpha^2-(3-\mu)\lambda\alpha+4\lambda^2]\alpha\cos\eta\alpha -$$

$$-[(1-\mu)\alpha-2(3-\mu)\lambda](\alpha-\lambda)(\alpha-2\lambda)\cos\eta(\alpha-2\lambda)\},$$

$$L_{V,\theta} = -\frac{1-\mu}{4}(\alpha-\lambda)\{[(1-\mu)\alpha+2(1+\mu)\lambda]\alpha\sin\eta\alpha-[(1-\mu)\alpha-$$

$$-2(3-\mu)\lambda](\alpha-2\lambda)\sin\eta(\alpha-2\lambda)\},$$

$$L_{V,M} = \frac{\alpha-\lambda}{2\lambda}\left\{\frac{(1-\mu)\alpha^2}{\alpha-2\lambda}\cos\eta\alpha-[(1-\mu)\alpha-2(3-\mu)\lambda]\cos\eta(\alpha-2\lambda)\right\}, \qquad (23)$$

$$L_{V_r V} = \frac{1-\mu}{4}\alpha\sin\eta\alpha - \frac{1}{4}[(1-\mu)\alpha-2(3-\mu)\lambda]\sin\eta(\alpha-2\lambda);$$

$$L_{V_w} = \frac{1-\mu}{2\lambda^2}\alpha(\alpha-\lambda)\{[(1-\mu)\alpha^2-(3-\mu)\lambda\alpha+4\lambda^2]\sin\eta\alpha -$$

$$-(\alpha-\lambda)[(1-\mu)\alpha+2(1+\mu)\lambda]\sin\eta(\alpha-2\lambda)\},$$

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On the general solution, in ...

$$L_{V\varphi} = \frac{1-\mu}{4\lambda}(\alpha-\lambda)(\alpha-2\lambda)[(1-\mu)\alpha+2(1+\mu)\lambda][\cos\eta\alpha - \cos\eta(\alpha-2\lambda)], \quad (24)$$

$$L_{VM} = \frac{\alpha-\lambda}{2\lambda^2}\{(1-\mu)\alpha\sin\eta\alpha - [(1-\mu)\alpha+2(1+\mu)\lambda]\sin\eta(\alpha-2\lambda)\},$$

$$L_{VV} = -\frac{1-\mu}{4\lambda}(\alpha-2\lambda)\cos\eta\alpha + \frac{1}{4\lambda}[(1-\mu)\alpha+2(1+\mu)\lambda]\cos\eta(\alpha-2\lambda),$$

$$L_{RW} = \frac{\alpha(\alpha-\lambda)}{2\lambda^2}\left\{\frac{(1-\mu)\alpha^2-(3-\mu)\lambda\alpha+4\lambda^2}{\alpha-2\lambda}\sin\eta\alpha - (1-\mu)(\alpha-\lambda)\sin\eta(\alpha-2\lambda)\right\},$$

$$L_{R\varphi} = \frac{1}{4\lambda}(\alpha-\lambda)\{[(1-\mu)\alpha+2(1+\mu)\lambda]\cos\eta\alpha - (1+\mu)(\alpha-2\lambda)\cos\eta(\alpha-2\lambda)\},$$

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$$L_{RM} = \frac{\alpha-\lambda}{2\lambda^2(\alpha-2\lambda)}[\alpha\sin\eta\alpha - (\alpha-2\lambda)\sin\eta(\alpha-2\lambda)],$$

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$$L_{RV} = -\frac{1}{4\lambda}[\cos\eta\alpha - \cos\eta(\alpha - 2\lambda)]. \qquad (25)$$

The obtained equations yield the sought-for general solution of the problem. If the plate contour can be described by sufficiently smooth functions, concrete problems can be solved by a method proposed by V.A. Ahar'ov in an earlier article. For hinged radial edges of the plate, this method yields

$$w_0 = 0; \quad M_0 = 0;$$

$$\theta_0 = -L_{wV}(\theta_0, \alpha)\varphi(\xi); \quad V_0 = L_{w\theta}(\theta_0, \alpha)\varphi(\xi) - \frac{1}{L_{wV}(\theta_0, \alpha)}\omega_p(\xi, \theta_0); \qquad (27)$$

$$\frac{\sin\eta_0\alpha}{\alpha}\frac{\sin\eta_0(\alpha - 2\lambda)}{\alpha - 2\lambda}\varphi(\xi) = \frac{1}{\lambda^3}\left[\frac{L_{MV}(\theta_0, \alpha)}{L_{wV}(\theta_0, \alpha)}\omega_p(\xi, \theta_0) - M_{\theta p}(\xi, \theta_0)\right] \qquad (28)$$

and for rigidly clamped edges:

$$w_0 = 0; \quad \theta_0 = 0;$$

$$M_0 = L_{wV}(\theta_0, \alpha)\varphi(\xi); \quad V_0 = -L_{wM}(\theta_0, \alpha)\varphi(\xi) - \frac{1}{L_{wV}(\theta_0, \alpha)}\omega_p(\xi, \theta_0); \qquad (29)$$

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$$[\alpha(\alpha-2\lambda)-\lambda^2\cos 2\eta_0\lambda-(\alpha^2-2\lambda\alpha-\lambda^2)\cos 2\eta_0(\alpha-\lambda)]\frac{1}{\alpha(\alpha-2\lambda)}\varphi(\xi)= \quad (29)$$

$$=8\lambda^2\left[\frac{L_M(\theta_0,\alpha)}{L_{w1}(\theta_0,\alpha)}w_p(\xi,\theta_0)-\theta_p(\xi,\theta_0)\right]. \quad (30)$$

A particular solution for w_p is found

$$w_p(\xi,\theta)=-\frac{r_1^3\lambda^2}{4}\int_0^{\theta}d\tau\int_{\xi-l\frac{\theta-\tau}{\lambda}}^{\xi+l\frac{\theta-\tau}{\lambda}}e^{2\lambda\zeta}d\zeta\int_0^{\tau}d\tau'\int_{\zeta-l\frac{\tau-\tau'}{\lambda}}^{\zeta+l\frac{\tau-\tau'}{\lambda}}e^{2\lambda\zeta'}p(\zeta',\tau')\,d\zeta'. \quad (38)$$

Further, several questions related to the use of the method of initial functions, are considered. It is noted that the transcendental operators (18) - (25) are interpreted as a shortened form of differential operators of infinite order. Such an interpretation

Card 9/10

On the general solution, in ...

imposes considerable restrictions on the initial functions: their unlimited differentiability is required. In certain cases it is possible to use the apparatus of generalized functions or to express the operators L in the form of integral- or functional operators. There are 3 figures and 7 Soviet-bloc references.

ASSOCIATION: Kyyivs'kyy politekhnichnyy instytut (Kyyiv Polytechnical Institute)

SUBMITTED: December 2, 1960

Card 10/10

26756
S/021/60/000/011/004/009
D204/D302

10.7500

AUTHORS: Ventsel', N.O., and Ahar'ov, V.A.

TITLE: Applying the method of initial functions to determining the frequency of flexural vibrations in rectangular plates

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 11, 1960, 1485 - 1491

TEXT: The free oscillations of a rectangular plate may be written

$$\frac{\partial^4 w}{\partial x^4} + 2\frac{\partial^4 w}{\partial x^2 \partial y^2} + \frac{\partial^4 w}{\partial y^4} - \nu^4 w = \frac{p}{D}, \qquad (1)$$

$$\theta_y = \frac{\partial w}{\partial x}, \quad \theta_x = -\frac{\partial w}{\partial y},$$

$$M_x = -D\left(\frac{\partial^2 w}{\partial y^2} + \mu\frac{\partial^2 w}{\partial x^2}\right),$$

Card 1/5

Applying the method of initial ...

$$M_x = -D\left(\frac{\partial^2 w}{\partial x^2} + \mu\frac{\partial^2 w}{\partial y^2}\right),$$

$$V_x = -D\left[\frac{\partial^3 w}{\partial x^3} + (2-\mu)\frac{\partial^3 w}{\partial x \partial y^2}\right],$$

$$V_y = -D\left[\frac{\partial^3 w}{\partial y^3} + (2-\mu)\frac{\partial^3 w}{\partial x^2 \partial y}\right], \qquad (1)$$

$$R = 2M_{xy} = -2(1-\mu)D\frac{\partial^2 w}{\partial x \partial y},$$

where $D = \frac{D^3}{12(1-\mu^2)}$ is the cylindrical rigidity, $\nu = \frac{\gamma h \omega^2}{gD}$ (2)
is the oscillation parameter, and ω is the frequency. [Abstractor's note: Symbols not explained, see P.F. Papkovich (Ref.1: Stroitel'naya mekhanika korablya (Structural Mechanics of a Ship) ch. II, 1941)]. The system is solved by the method of initial functions.

Card 2/5

Applying the method of initial ...

Dimensionless coordinates $\xi = x/a$, $\eta = y/a$ are taken from the initial line $x = 0$ and the equations are put in canonical form

$$w(\xi, \eta) = a(L_{w w} W_0 + L_{w \theta} \theta_0 + L_{w M} M_0 + L_{w V} V_0),$$

$$\theta_x(\xi, \eta) = L_{\theta_x w} W_0 + L_{\theta_x \theta} \theta_0 + L_{\theta_x M} M_0 + L_{\theta_x V} V_0),$$

$$\theta_y(\xi, \eta) = L_{\theta w} W_0 + L_{\theta \theta} \theta_0 + L_{\theta M} M_0 + L_{\theta V} V_0,$$

$$M_x(\xi, \eta) = -\frac{D}{a}(L_{M_x w} W_0 + L_{M_x \theta} \theta_0 + L_{M_x M} M_0 + L_{M_x V} V_0),$$

$$M_y(\xi, \eta) = -\frac{D}{a}(L_{M w} W_0 + L_{M \theta} \theta_0 + L_{M M} M_0 + L_{M V} V_0),$$

$$V_x(\xi, \eta) = -\frac{D}{a^2}(L_{V_x w} W_0 + L_{V \theta} \theta_0 + L_{V M} M_0 + L_{V V} V_0), \quad (3)$$

$$V_y(\xi, \eta) = -\frac{D}{a^2}(L_{V_y w} W_0 + L_{V_y \theta} \theta_0 + L_{V_y M} M_0 + L_{V_y V} V_0),$$

Card 3/5

Applying the method of initial ...

$$R(\xi, \eta) = -2(1-\mu)\frac{D}{a}(L_{Rw}W_0 + L_{R\theta}\theta_0 + L_{RM}M_0 + L_{RV}V_0). \quad (3)$$

where

$$W_0 = W_0(\eta) = \frac{1}{a}w(0, \eta),\ \theta_0 = \theta_0(\eta) = \theta_y(0, \eta), \quad (4)$$

$$M_0 = M_0(\eta) = -\frac{a}{D}M_y(0, \eta),\ V_0 = V_0(\eta) = -\frac{a^2}{D}V_z(0, \eta)$$

Substitution in (1) gives a system of general differential equations for functional operators. Integration and the initial conditions

$$L_{sj}\Big|_{\xi=0} = \begin{cases} 1, & \text{if } s = j \\ 0, & \text{if } s \neq j \end{cases} \qquad s, j = w, \theta, M, V$$

and substitution gives a series of equations which, together with

Card 4/5

Applying the method of initial ...

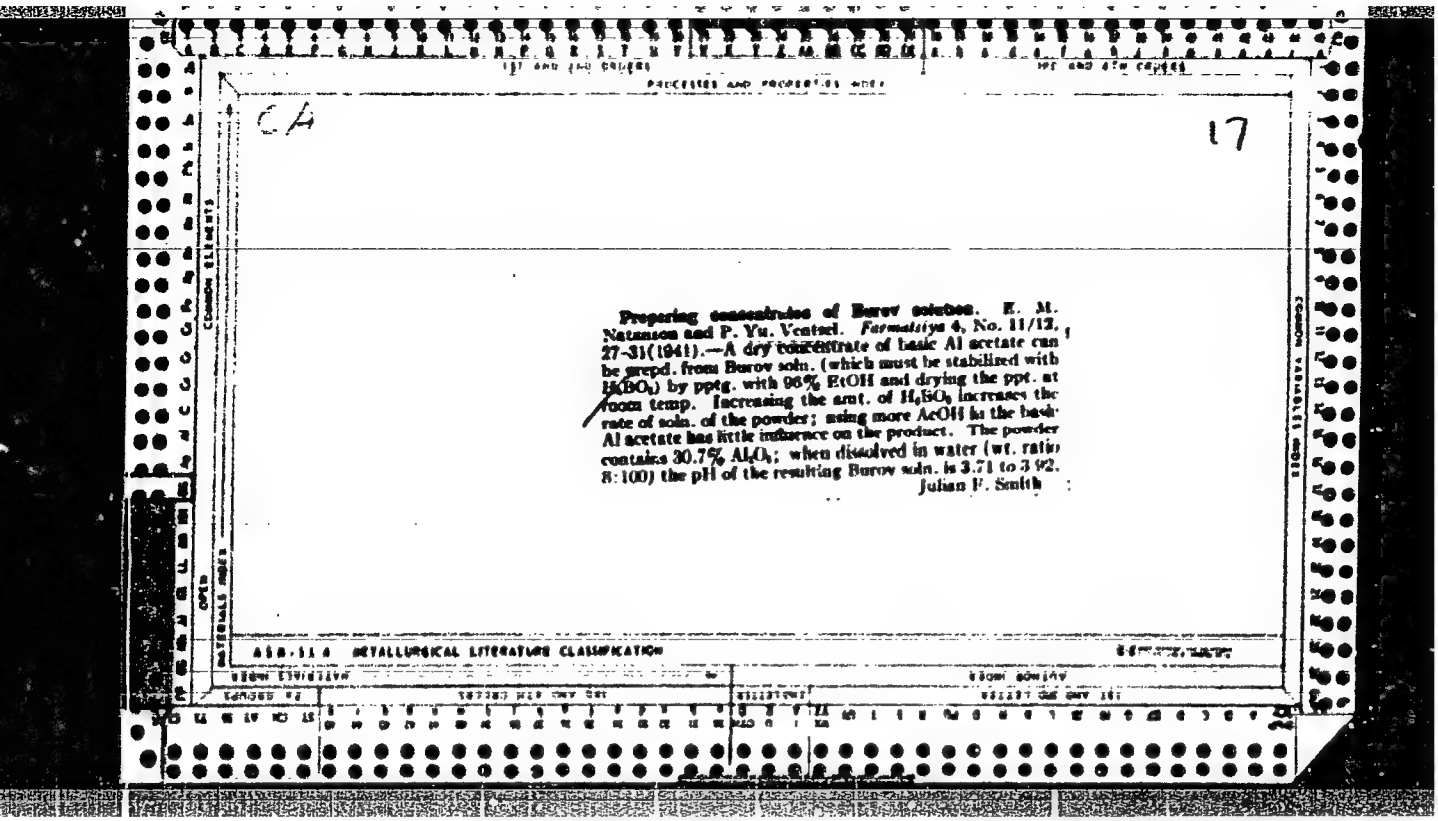
(3) give the general solution of (1) with arbitrary conditions on the edge of the rectangular plate. The boundary conditions on the initial line give two relationships between W_0, t_0, M_0 and V_0, so that (3) are now dependent on two unknown initial functions. The boundary conditions on the edge of the plate parallel to the initial line gives a system of two homogeneous equations in these functions which give rise to one transcendental solvable equation, in terms of a function $\varphi(\eta)$. The method gives a sufficient number of arbitrary parameters for the exact or approximate satisfaction of the boundary conditions. The cases of symmetric, quasisymmetric and non-symmetric oscillations are worked out in detail. There are 6 figures and 4 Soviet-bloc references.

ASSOCIATION: Kyyivs'kyy politekhnichnyy instytut (Kiyev Polytechnic Institute)

PRESENTED: by H.M. Savin, Academician of the AS UkrSSR

SUBMITTED: April 18, 1960

Card 5/5



CA

17

Preparing concentrates of Burov solution. E. M. Natanson and P. Yu. Ventzel. *Farmatsiya* 4, No. 11/12, 27-31(1941).—A dry concentrate of basic Al acetate can be prepd. from Burov soln. (which must be stabilized with H_3BO_3) by pptg. with 96% EtOH and drying the ppt. at room temp. Increasing the amt. of H_3BO_3 increases the rate of soln. of the powder; using more AcOH in the basic Al acetate has little influence on the product. The powder contains 30.7% Al_2O_3; when dissolved in water (wt. ratio 8:100) the pH of the resulting Burov soln. is 3.71 to 3.92.

Julian F. Smith

A58-11A METALLURGICAL LITERATURE CLASSIFICATION

TYUR, Rudol'f Al'bertovich; LUKIN, O.A., red.; VENTSEL', O.A., red.; VENTSEL', I.V., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Increasing the wear resistance of machine parts by metal spraying using high frequency currents] Povyshenie iznosostoikosti detalei mashin sposobom metallizatsii napyleniem s primeneniem tokov vysokoi chastoty. Leningrad, 1963. 17 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia obrabotka metallov, no.14) (MIRA 17:1)

VINTSEL', G.S., C and Agr Sci--(diss) " Raw material bases of the logging industry in Kostromskaya Oblast and ways of their rational utilization." Gor'kiy, 1954. 15 pp (Min of Higher Education USSR. Gor'kiy Order of Lenin Forestry Engineering Acad im S.M. Kirov), 100 copies (KL,27-58, 110)

ACCESSION NR: AP4036524 S/0089/64/016/005/0413/0417

AUTHOR: Ventsel', P.

TITLE: Calculation of thermal reactors with plutonium reuse

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 413-417

TOPIC TAGS: thermal reactor, plutonium reuse, natural uranium reactor, depleted uranium reactor, calculation

ABSTRACT: This article considers the steady state operation of a natural or depleted uranium reactor with partial return of the resultant plutonium into the fuel cycle. It also determines the optimum values for avoiding resonance absorption in U^{238}, the optimum moderator and fuel ratio, and the portion of plutonium to be returned into the fuel cycle. The dependence of the neutron multiplication coefficient on the above parameters is investigated and it is indicated that quantity k (multiplication coefficient) has a peak value. The experimental studies available indicated that water cooled moderated reactors or boiling water reactors can be operated with natural uranium (or its UO_2) and with partial addition of formed plutonium. No U^{235} enrichment facility is required. Extensive calculations

Card 1/2

ACCESSION NR: AP4036524

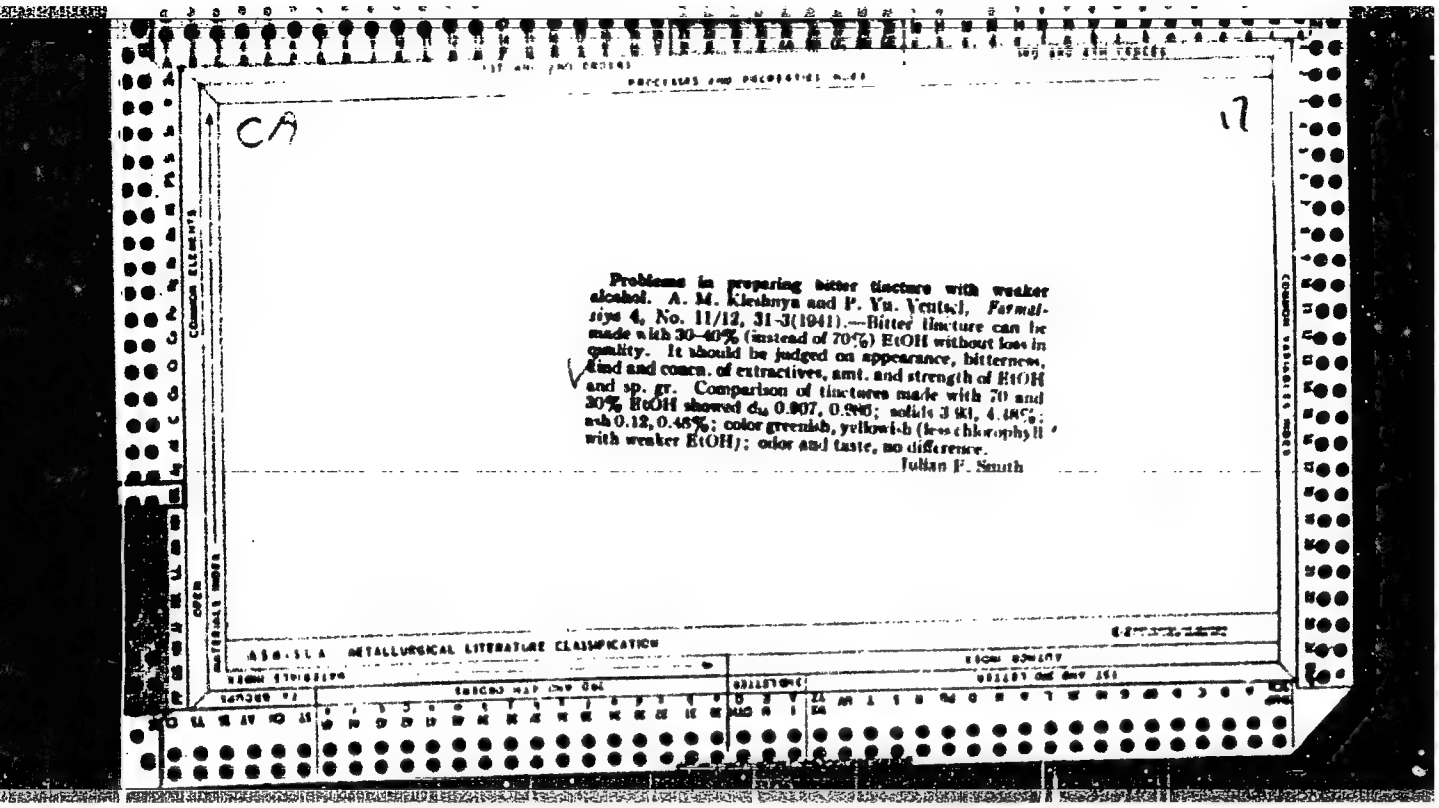
indicate that a burnout of 10 Mwd/ton can be reached. Upon return of plutonium into the cycle, burnout can be raised considerably in natural uranium reactors with graphite or heavy water moderators. Here, even depleted uranium can be used. The method is also applicable to the uranium-thorium cycle. "Gratitude is expressed to Prof. Dr. Shteynbek for outlining the work and discussing it, and to Dr. Fuks for his valuable suggestions." Orig. art. has: 1 figure, 21 formulas, no tables.

ASSOCIATION: VEB Atomkraftwerk, Betriebsteil Berlin-Pankow GDR(VEB Power Plant, Berlin-Pankow Division)

SUBMITTED: 06Apr63 DATE ACQ: 03Jun64 ENCL: 00

SUB CODE: NP NO REF SOV: 003 OTHER: 006

Card 2/2



CA

17

Problems in preparing bitter tincture with weaker alcohol. A. M. Kleshnya and P. Yu. Ventsel, *Farmatsiya* 4, No. 11/12, 31-3(1941).—Bitter tincture can be made with 30–40% (instead of 70%) EtOH without loss in quality. It should be judged on appearance, bitterness, kind and concn. of extractives, amt. and strength of EtOH and sp. gr. Comparison of tinctures made with 70 and 30% EtOH showed d_{20} 0.907, 0.980; solids 3.91, 4.48%; ash 0.12, 0.46%; color greenish, yellowish (less chlorophyll with weaker EtOH); odor and taste, no difference.

Julian F. Smith

VENTSEL', S.V., doktor tekhn.nauk, prof.

Reviews and bibliography. Vest.mashinostr. 44 no.12:82-83 D '64.
(MIRA 18:2)

VENTSEL', S.V., doktor tekhn.nauk, prof.

Important factor in modeling working conditions of oil in internal combustion engines. Vest.mashinostr. 42 no.9:31-34 S '62. (MIRA 15:9)
(Gas and oil engines—Lubrication)

VENTSEL', S.V., Doc Tech Sci -- (diss) "Study of the wear of internal combustion engines in connection with oil-aging processes." Khar'kov, 1959, 24 pp (Acad Sci UkSSR. Inst of Construction Mechanics) 110 copies. List of author's works p. 24 (12 titles) (KL, 33-59, 117)

69976

16.3500 S/020/60/131/05/03/069

AUTHOR: Ventsel',T.D.

TITLE: A Free Boundary Problem for the Heat Equation

PERIODICAL: Doklady Akademii nauk SSSR,1960, Vol. 131, No. 5,pp.1000-1003

TEXT: Problem: Determine functions $u(x,t)$ and $s(t)$ so that $s(t)$ for $t \geq 0$ is defined and continuous, $s(0) = 0$, $s(t) > 0$ for $t > 0$, while $u(x,t)$ in $D\{0 < x < s(t),\ 0 < t < T\}$ satisfies the equation

$$(1) \qquad \frac{\partial^2 u}{\partial x^2} = \frac{\partial u}{\partial t},$$

in $\bar{D}$ it is continuous together with $\frac{\partial u}{\partial x}$ and

$$(2) \qquad u\big|_{x=0} = f_1(t),\ u\big|_{x=s(t)} = f_2(t),\ \frac{\partial u}{\partial x}\Big|_{x=s(t)} = g(t).$$

Existence theorem: Let $f_1, f_2, g \in C^2$, $f_1 \leq 0$, $f_2 \leq 0$, $g > 0$, $f_1(0) = f_2(0) = 0$, $f_2 - f_1 > 0$ for $t > 0$,

$$(3) \qquad f_1' \leq 0,\ f_2' \leq 0,$$

$$(4) \qquad f_2'' \geq 0,\ (f_2 - f_1)' \geqslant 0,\ g' \leq 0.$$

Card 1/2

69976

S/020/60/131/05/03/069

A Free Boundary Problem for the Heat Equation

Then there exists a solution of the problem, where u, $\frac{\partial^2 u}{\partial x^2}$, $\frac{\partial u}{\partial t}$ are continuous in $\bar{D}$; s(t) is differentiable and $\frac{\partial s}{\partial t} \geqslant 0$.

Uniqueness theorem: The solution u(x,t), s(t) is unique if u, $\frac{\partial^2 u}{\partial x^2}$, $\frac{\partial u}{\partial t}$ are continuous in $\bar{D}$; s(t) is differentiable, $\frac{\partial s}{\partial t} \geqslant 0$, the functions f_1, f_2, f_1', f_2', g are continuous and satisfy the conditions (3).

The author mentions Professor O.A.Oleynik.

There is 1 Soviet reference.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

PRESENTED: December 16, 1959, by I.G.Petrovskiy, Academician

SUBMITTED: December 10, 1959

VENTSEL' S.V.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor Fuels. Lubricants. I-13

Abs Jour : Ventsel' S.V.
Title : Structure and Lubricating Action of Spent Motor Oils

Orig Pub : Kolloid. zh., 1953, 15, No 5, 331-333

Abstract : No abstract.

Card 1/1

AUTHOR VENTSEL', S.V. PA - 2167

TITLE On the Composition of Admixtures in Used Motor Oils.(Sostav mekhanicheskikh primesey v rabotavshikh motornykh maslakh).

PERIODICAL Izvestiia Akad.Nauk SSSR, Otdel.Tekhn., 1957, Nr 1, pp 153-156 (U.S.S.R.)

Received 3/1957 Reviewed 4/1957

ABSTRACT An X-ray structural analysis of floating particles which had been taken from already used motor oils was made. The particles were filtrated analytically and then processed chemically by means of pure piridium. This was done in order to increase the relative content of unorganic components and thus to obtain a maximum distinctness in the Debgegrams. The oil samples were taken from the oil sumps of tractor-motors.

Conclusions. 1) The basic unorganic component of the mechanic admixtures of used oils is α-iron. 2) The largest metal particles are covered with a visible layer of ferric oxide of a thickness of 460 ÷ 720 A.

3) There are several reasons for assuming that these layers mainly consist of γ-oxydes of iron. (1 table and 2 illustrations)

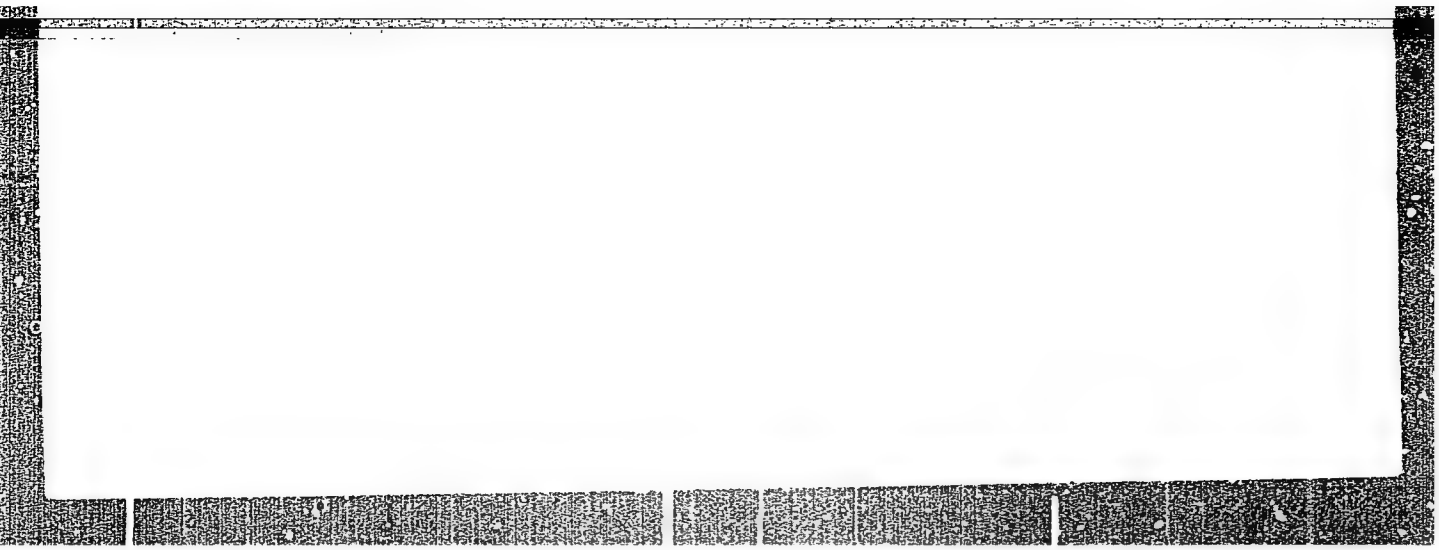
ASSOCIATION Not given

PRESENTED BY

SUBMITTED 16. 6. 1956

AVAILABLE Library of Congress

Card 1/1



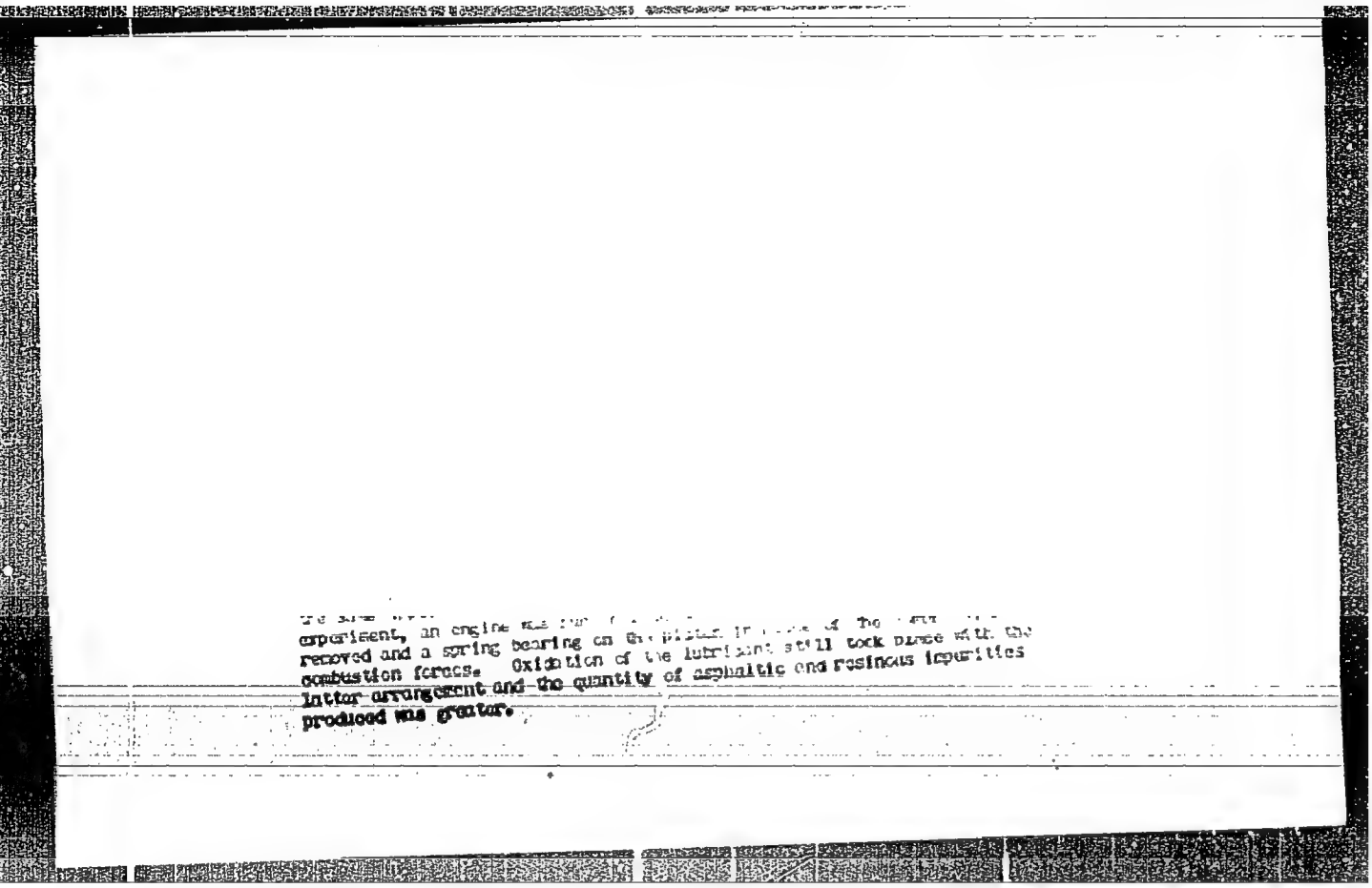
APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859410018-4"

VENTSEL', S.V., kandidat tekhnicheskikh nauk.

Operating life of lubricants in automobile and tractor engines.
Vest.mash.35 no.9:21-23 S '55. (MLRA 9:1)
(Automobiles--Lubrication) (Tractors--Lubrication)

VENTTSEL', M.K., professor; VITMAN, A.I., redaktor; SHIRNSKIY, I.A., tekhnicheskiy redaktor

[Spherical trigonometry; a short course] Sfericheskaia trigonometriia; kratkii kurs. Izd. 2-oe, ispr. i dop. Moskva, Izd-vo geodez. i kartogr. lit-ry, 1948. 153 p. (MLRA 9:12)
(Trigonometry, Spherical)



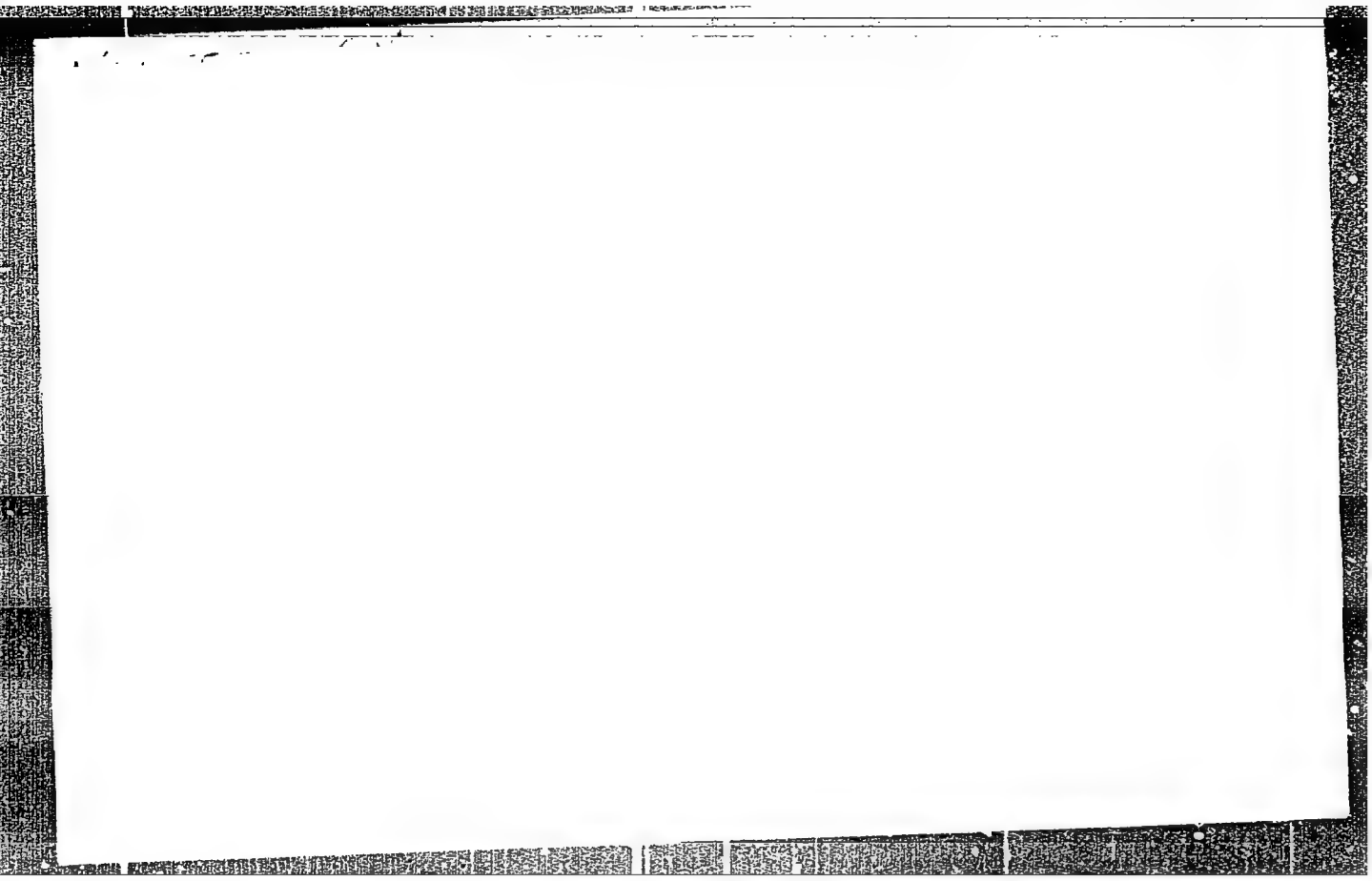
experiment, an engine was run [illegible] of the [illegible] removed and a spring bearing on the piston [illegible] still took place with the combustion forces. Oxidation of the lubricant [illegible] latter arrangement and the quantity of asphaltic and resinous impurities produced was greater.

VENTSEL', S.V.

Composition of mechanical mixtures in used motor oils. Izv.AN SSSR. Otd.tekh.nauk no.1:153-156 Ja '57. (MLRA 10:3)
(Lubrication and lubricants)

VENTSEL', S.V. (Khar'kov).

Microstructure of mechanical admixtures in engine lubricating oils.
Izv.AN SSSR. Otd. tekh.nauk no.11:120-125 N '56. (MLRA 10:1)
(Lubrication and lubricants)



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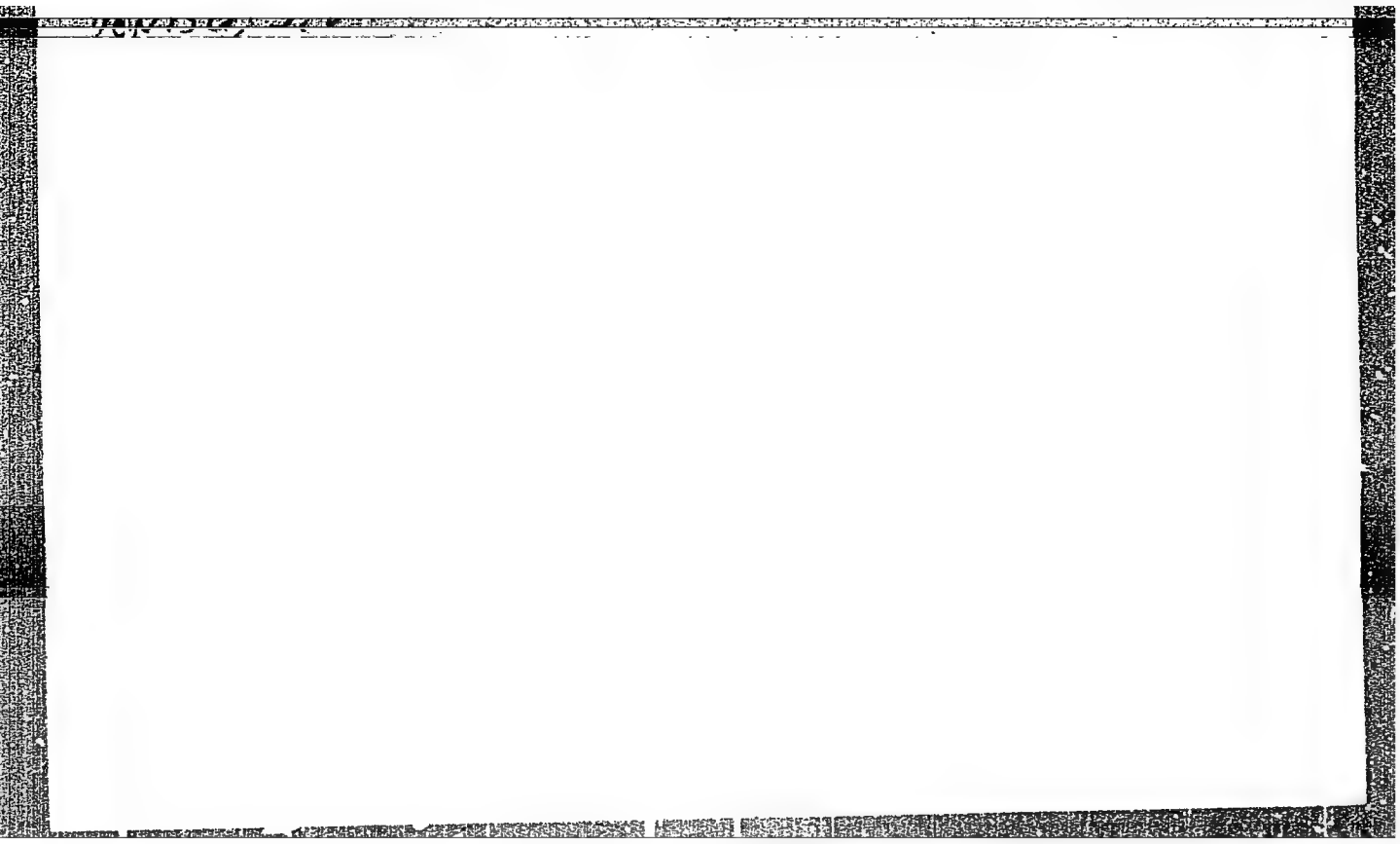


APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859410018-4"

VENTSEL', S.V., doktor tekhn.nauk, prof.; CHUPIS, N.M., dotsent

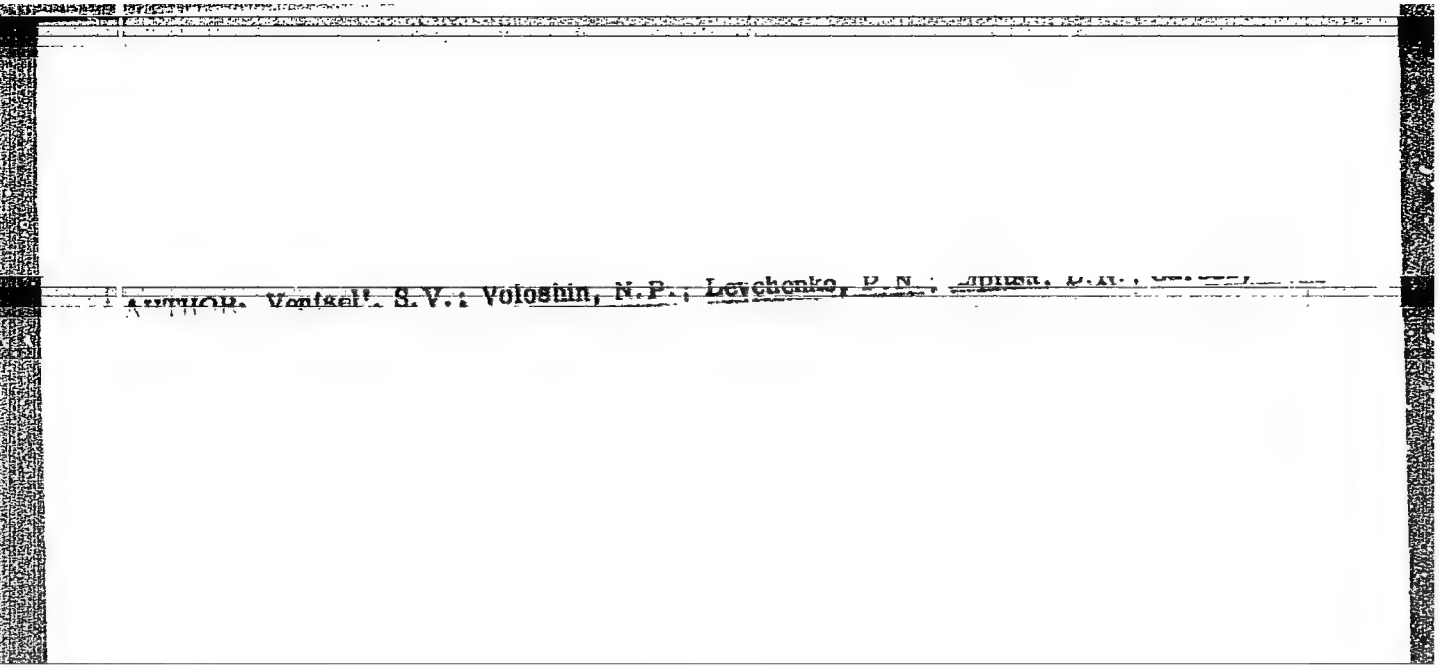
Using the method of ground holes in determining the wear of machine parts. Vest.mashinostr. 43 no.8:29-30 Ag '63. (MIRA 16:9)

(Mechanical wear--Testing)

VENTSEL', S.V., doktor tekhn. nauk, prof.; LELYUK, V.A., inzh.

Innovations in the running-in of machine parts. [illegible]
mashinostr. no.5:55-60 '64.

1. Khar'kovskiy inzhenerno-stroitel'nyy institut.



AUTHOR: Ventsel', S.V.; Volosnin, N.P.; Levchenko, P.N.; [illegible]

Engines operating

VENTSEL', S.V.; CHUPIS, N.M. [Chupys, M.M.]; LELYUK, V.A. [Leliuk, V.O.]

Effect of the oxidation of oil on the process of running-in the ring-socket pair of internal combustion engines. Dop. AN UkrSR (MIRA 17:5)
[illegible]499-502 '64.

1. Khar'kovskiy inzhenerno-stroitel'nyy institut. Predstavleno akademikom AN UkrSSR F.P.Belyankinym [Bieliankin, F.P.].

VENTSEL', S.V.; TELETOV, S.G.

Electrophoretic study of mechanical admixtures in motor oils. Koll.zhur. 16 no.5:322-324 S-O '54. (MLRA 7:11)
(Oil analysis) (Cataphoresis)

VEMSEL', S. V.

FJ-15h /Structure and lubricating action of used motor oils/ Struktura i smazochnoe deistvie otrabotannykh motornykh masel.
Kolloidnyi Zhurnal, 15(5): 331-333, 1953

VENTSEL', S.V.

Lubricating effect of used oils. Tren. i izn.mash. no.9:84-90 '54.
(MLRA 7:9)

(Lubrication and lubricants) (Oil reclamation) (Mechanical wear)

VENTSEL, S.V.

Chemical Abst.
Vol. 48 No. 9
May 1954
Petroleum, Lubricants, and Asphalt

(1)

Used lubricant oils. S. V. Ventsel. [illegible]
S.R.) 14, 337-43(1952); [illegible]
47, 1920i. [illegible]

8-31-54
[illegible]

1. VENTSEL', S. V.

2. USSR (600)

4. Lubrication and Lubricants

7. Investigation of used lubricants. Koll. zhur. 14 no. 5, '52.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

VENTSEL', S.V., kandidat tekhnicheskikh nauk, dotsent.

Deterioration of motor oil and the abrasive wear of internal combustion engines. Vest.mash. 33 no.5:26-28 My '53. (MLRA 6:5)
(Gas and oil engines)

VENTSEL', S.V.

Lubrication and Lubricants

Testing methods for lubricants in engines. Vest. mash. 32 no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress. October, 1952. UNCLASSIFIED

VENTSEL, S. V.

Chem Abs V48
1-25-54
Petroleum

Structure and lubricating action of used motor oils. S. V. Ventsel. *Kolloid. Zhur.* 15, 331-3(1953).—The ultraviolet light absorption of used and then filtered motor oils is identical with that of fresh oils. The filter residue of used oils was sepd. into org. (*a*) and inorg. (*b*) parts. The wear prevention (in a Diesel motor) of used oils was greater the greater the ratio *a*:*b*. At the same value of *a*:*b*, the wear prevention by a fresh oil was almost equal to that by used oils. The org. impurities render the inorg. particles innocuous. J. J. Bikerman

FD-3238

USSR/Chemistry - Lubricants

Card 1/1 Pub. 41-19/22

Author : Ventsel', S. V. Khar'kov

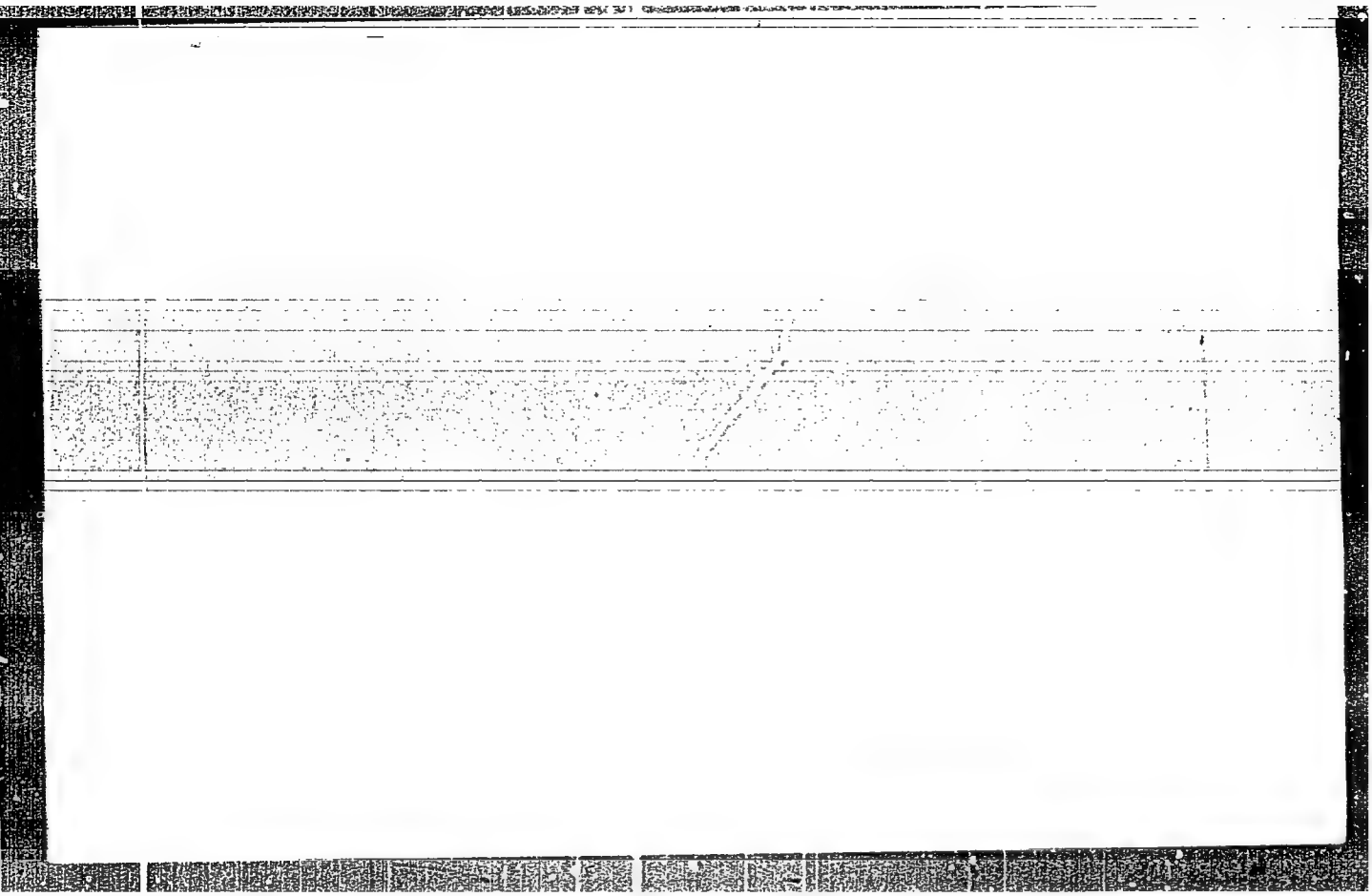
Title : The contact effect as a factor in the oxidation of oil in internal combustion engines

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 7, 139-144, Jul 55

Abstract : Describes apparatus for analytical tests with machine oil Su (GOST 1707-42), aviation oil MS-14, and motor oil ASp-5 (additives according to GOST 5303-50). Concludes that the contact effect accelerates oxidation of motor oils and suggests that test results can be utilized for development of lubrication systems, improving methods of reclaiming used oils, and standardizing laboratory oxidation ratings for motor oils. One illustration; 1 graph; 3 tables. Seven references, all USSR.

Institution :

Submitted : 18 January 1955



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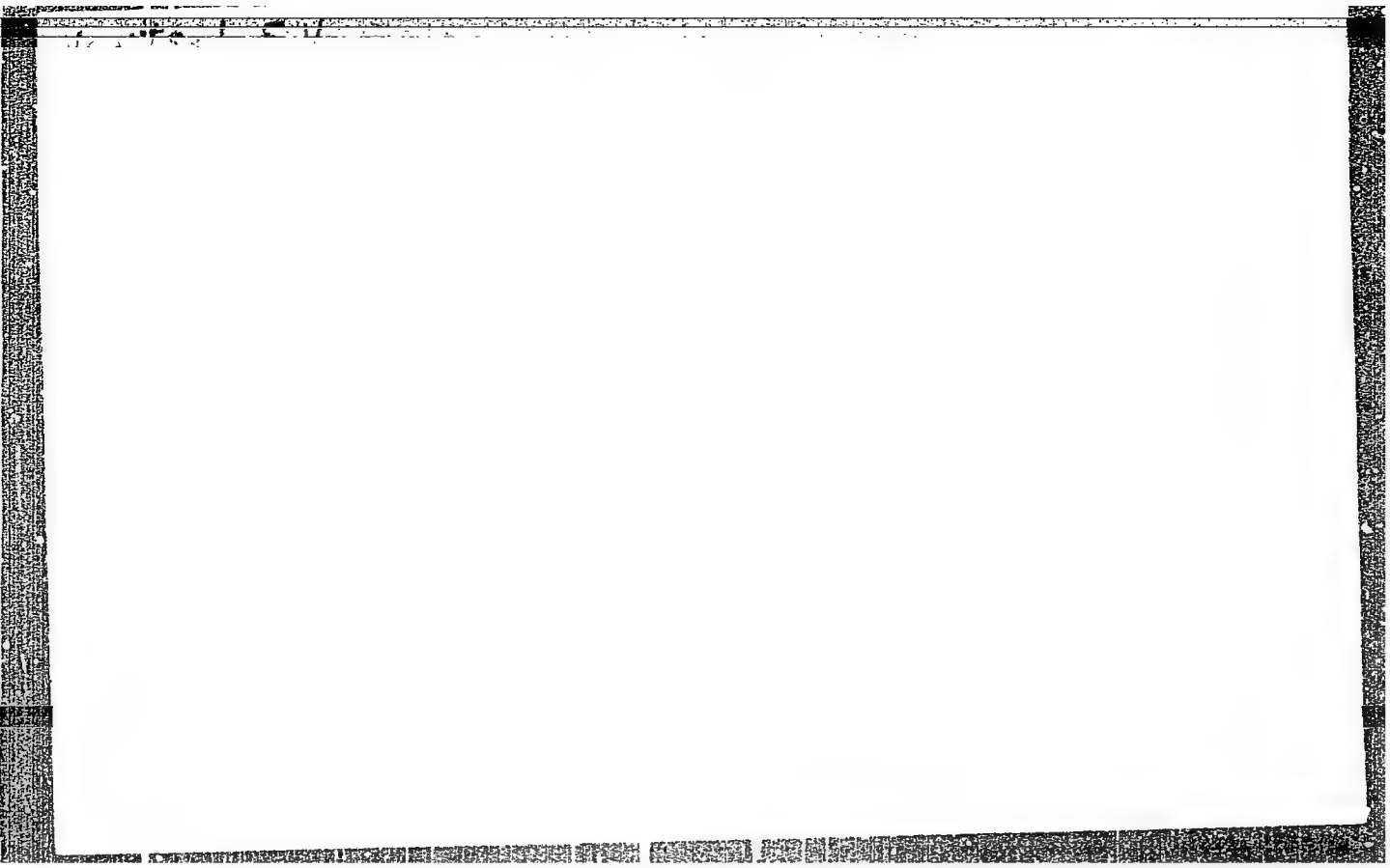

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BRANDT, N.B.; VENTSEL', V.A.

Effect of universal compression on oscillation of the magnetic susceptibility of bismuth at low temperatures [with summary in English]. Zhur. eksp. i teor. fiz. 35 no.5:1083-1087 N '58. (MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet.
(Bismuth--Magnetic properties)
(Low temperature research)

VENTSEL, V.A.

[illegible], [illegible]; [illegible]MBERTS[illegible]H, G.[illegible]; [illegible]; [illegible], V.[illegible]

Anti[illegible] [illegible] from antiprotons in collisions with [illegible]. (Neutrons) (Protons) [illegible] 26 no7: [illegible]6-[illegible] Jl '5[illegible]. ([illegible] 1 [illegible])

VENTSEL, S.V.

4

① Prop

3088. ✓ AGEING OF OIL AND ABRASIVE WEAR OF INTERNAL COMBUSTION ENGINES. Ventsel, S.V. (Vestn. Mashin. (Mach. Ind. Bull., Moscow), 1953, vol. 33, (5), 25-29; abstr. in Chem. abstr., 1953, vol. 47, 10829, 10830). Samples of lubricating oil taken from various internal combustion engines (aviation, tractors, locomotives, stationary, etc.) were filtered and then subjected to extensive tests along with unfiltered and fresh oil samples. The properties of used oil before filtration differed greatly from those of fresh oil; however, the removal of mechanical impurities (by filtration) decreased these differences. Thus, the acid numbers of used oils increased by 53-230% and the saponification value by 210-155% compared to fresh oil. Filtration reduced the difference in the acid numbers to 23-40% and reduced the saponification values 2.5 times. The molecular weights before and after filtration did not change. Absorption spectra of fresh and filtered oils were very close, indicating that the change in chemical composition was insignificant. Filtration residues were dried and divided into 2 lots, one of which was analysed and the other placed for 7 days in strong hydrochloric acid at 30° after which they were filtered, washed, dried, and analysed. The difference in the analyses was very small. Microscopic analyses of used oils showed the amber background of oil interspersed with black particles of mechanical admixtures. The particles formed aggregates, their quantity depending on the length of service of an oil. The results are taken to show that the organic products of oil deterioration are adsorbed on metal particles derived from engine wear and are removed by filtration. It is suggested that accumulation of these carbon compounds in the oil even improves to some extent the lubricating qualities of an oil. While oil should be changed periodically, primarily to prevent clogging of passage by solid particles, it should not be changed too frequently. C.A.

M 54

Fuel Abst.
Vol. 15 No. 4
Apr. 1954
Other Prime Movers

VENTSEL', S.V.

Structure and lubricatory effect of motor waste-oil. Koll.zhur. 15 no.5: 331-333 '53. (MLRA 6:9)

(Lubrication and lubricants)

VENTSEL', S. V.

USSR/Chemistry - Lubricating Oils — Sep/Oct 53

"Structure and Lubricating Effect of Used Motor Oils," S. V. Ventsel', Khar'kov

Koll Zhur, Vol 15, No 5, pp 331-333

On the basis of the results described, indicates that the mechanical admixtures in used lubricating oil have a multicomponent structure and that the metal particles are covered with protective colloids. Suggests that the ratio of the quantity of organic impurities to the quantity of inorganic impurities may serve as an index of the quality of lubricating oil.

270T15

VENTSEL', S.V.; IELYUK, V.A.

Antifriction properties of used mineral lubricating oils.
Koll. zhur. 26 no.5:562-566 S-O '64.
(MIRA 17:10)

1. Khar'kovskiy inzhenerno-stroitel'nyy institut.

VENTTSEL', M.K.

Brief outline history of practical astronomy in Russia and the U.S.S.R. (development of methods for the determination of time and latitudes). Ist.-astron. issl. no.2:7-137 '56. (MLRA 10:6)
(Astronomy, Spherical and practical--History)

VENTSEL', T.D.

MIRANDA, Carlo; VENTSEL', T.D. [translator]; OLEYNIK, O.A., red.;

[Equations with partial derivatives of the elliptical type. Translated from the Italian] Uravneniia s chastnymi proizvodnymi ellipticheskogo tipa. Perevod s ital'ianskogo T.D.Venttsel'. Pod redaktsiei O.A.Oleinik. Moskva, Izd-vo inostrannoi lit-ry, 1957. 256 p. (MIRA 11:6)
(Differential equations, Partial)

VENTSEL', T.D.

Certain quasilinear parabolic systems. Dokl. AN SSSR 117 no.1:21-24 N-D '57. (MIRA 11:3)

1. Predstavleno akademikom I.G.Petrovskim.
(Differential equations, Partial)

S/181/62/004/002/030/051
B101/B102

AUTHORS: Likhter, A. I., and Ventsel', V. A.

TITLE: Hall effect in cerium during a phase transition of the first kind

PERIODICAL: Fizika tverdogo tela, v. 4, no. 2, 1962, 485 - 489

TEXT: A study has been made of the phase transition accompanied by an abrupt change in volume of Ce at pressures of up to 10,000 atm and at room temperature by measuring both the Hall emf and the resistance. The apparatus used for the purpose was similar to that described by A. I. Likhter and T. S. D'yakonova (FTT, 1, 95, 1959). The Hall emf was measured with an Ф-12 (F-12) photoelectric amplifier. The Ce specimen (7.5·2·0.12 mm) contained 0.02% Fe, < 0.75% Nd + Pr, and < 0.001% Cd + Pb + Bi + Sn. X-ray analysis showed no hexagonal phase in the specimen. Pure gasoline was used for pressure transmission. A sudden drop of the Hall emf was found between 7600 and 8000 atm. With decreasing pressure the transition likewise occurred in the same pressure range. The transition point was not shifted by a 100-fold rise or drop of pressure. At atmospheric pressure, the Hall coefficient A_p was $(2.0 \pm 0.05) \cdot 10^{-4}$ cm^3/coulomb. As the

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Hall effect in cerium during a ..

magnetic field was non-uniform, the ratio A_p/A_o was used, where A_o is the value obtained by F. K. Speeding et al. (Phys. Rev., 91, 1372, 1953). A constant value of 0.25 A_o was reached at 10,000 atm. A discussion on the basis of data concerning the conductivity of rare-earth metals indicates that the Hall coefficient is changed by the transition of a 4f electron into 5d shell. A phase transition induced by pressure and at room temperature is more complete than one induced by cooling. L. F. Vereshchagin, Corresponding Member AS USSR, is thanked for a discussion. There are 1 figure, 1 table, and 12 references: 5 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: R. D. Beecroft, C. A. Swenson, J. Phys. Chem. Solids, 15, 234, 1960; J. M. Lock, Proc. Phys. Soc. (London), B70, 566, 1957; M. K. Wilkinson, Phys. Rev., 122, 1409, 1961; C. J. McHargue, H. L. Jakel, Jr. Acta Met., 8, 637, 1960.

ASSOCIATION: Institut fiziki vysokikh davleniy AN SSSR, Moskva (Institute of High-pressure Physics, AS USSR, Moscow)

SUBMITTED: September 25, 1961

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VENTSEL', T.D. (Moskva).

Application of the finite difference method to the solution of the first boundary value problem for equations of the parabolic type. Mat.sbor.40 no.1:101-122 S '56. (MLRA 9:12)
(Differential equations, Partial) (Difference equations)

VENTSEL, V.

Ventsel, V. "Concerning the Interpretation of Geophysical Data in Oil Explor-tion." Neftianoe Khoziaistvo, Moscow, No. 7, 1939, pp. 20-23.

VENTSEL', Yelena Sergeyevna

Elementy teorii igr. Moskva, Fizmatgiz, 1959.
66 p. diagrs. (Populyarnyye Lektsii po Matematike, vyp. 32)

VENTSEL', Yelena Sergeyevna, GUTCHENKA, N.Ya., red.

[Introduction to the calculus of operations] Vvedenie v issledovanie operatsii. [Kiev] Izd-vo Kievskogo un-ta, 1964. 387 p. (MIRA 17:9)

VENTSEL', Yelena Sergeyevna, SHIROKOVA, S.A., red.; MUDNO, K.F., tekhn. red.

[Probability theory] Teoriia veroiatnostei. Izd.2., perer. i dop. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1962. 564 p. (MIRA 15:4)

(Probabilities)

VENTTSEL', Ye.S., prof., doktor tekhn.nauk

Generalization of equations and Erlang's formulas for a mass service system of a mixed type with a limited waiting period. Mat.sbor. 44 no.1:43-49 Ja '61. (MIRA 14:3)
(Communication science) (Probabilities)

VENTTSEL', Ye.S. (Moskva)

Problems and basic principles of the theory of games. Mat.v shkole no.4:3-20 Jl-Ag '62. (MIRA 15:11)
(Games, Theory of)

VENTTSEL', Yelena Sergeyevna; BAYEVA, A.P., red.

[Elements of dynamic programming] Elementy dinamicheskogo programmirovaniia. Moskva, Izd-vo "Nauka," 1964. 173 p. (MIRA 18:2)

ACC NR: AP6035496 (A) SOURCE CODE: UR/0198/66/002/010/0083/0090

AUTHOR: Vinokurov, L. P. (Khar'kov); Ventsel', E. S. (Khar'kov)

ORG: Khar'kov Civil Engineering Institute (Khar'kovskiy inzhenerno-stroitel'nyy institut)

TITLE: Problem on contact of shallow cylindrical shells with plates

SOURCE: Prikladnaya mekhanika, v. 2, no. 10, 1966, 83-90

TOPIC TAGS: ~~cylindrical shell~~, shallow cylindric shell, plate stiffened shell, finned cylindric shell, cylindric shell structure, shell deformation, reinforced shell structure, contact stress

ABSTRACT: The deformation of shallow cylindrical shells stiffened along the generatrices on their outer surface by plates normal to the middle surface is investigated. The loading of the shell skin is considered as consisting of the given external loading of the shell and an additional loading due to the joints of the shell with plates. The displacements and moments in the shell along the line of contact are analyzed by using the equations of the V. Z. Vlasov engineering shell theory modified in accordance with the contact conditions. Using the conditions of the joint deformation of the shell-plate system, the displacements in the middle surface of the shell are expressed through the displacements along the contact edge of the plate, and the derivation and use of expressions for determining the reactive loading (the normal and longitudinal components of the plate resistance) are indicated, assuming that the reactive contact stresses are constant across the plate

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ACC NR: AP6035496

thickness. The method is illustrated by a sample analysis of a simply supported shallow cylindrical shell joined with a longitudinal plate. A uniform normal load is applied to the shell only. A discrete variational method combined with the Bubnov-Galerkin method is used in determining the displacements and bending moments in the plate-stiffened shell. The distribution of moments along the line of the plate-shell contact is given in diagrams and compared with the moments in a plain shell under identical conditions. Orig. art. has: 2 figures and 26 formulas.

SUB CODE: 20/ SUBM DATE: 20Jun66/ ORIG REF: 003/

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Parachutes in space technology. Kryl. rod. 16 no.12 [illegible] p.165.
(MIRA 18:12)

SULKHANOV, Petr Petrovich; VENTSENOSISEV, Yuriy Nikolayevich; KARAVASHKIN, S.I., red.; MEL'NIKOVA, A.G., red. izd-va; VDOVINA, V.M., tekhn. red. (MIRA 14:10)

[Mechanization of riparian log dumps] Opyt mekhanizatsii rabot na prirechnykh lesnykh skladakh. Moskva, Goslesbumizdat, 1960. 46 p. (Lumbering—Equipment and supplies)

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Dissertation: "The Investigation of the Laws Governing the Growth of Plants." Inst of Physiology of Plants imeni K. A. Timiryazev, Acad Sci USSR, 11 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)